

# DDC

## CEM II/B-M (V-LL) 32,5 N

Portland composite cement MSZ EN 197-1:2011

### Beremend



**DDC** In harmony with the environment.

**DUNA-DRÁVA CEMENT**  
HEIDELBERGCEMENT Group

## Portland composite cement MSZ EN 197-1:2011

**The CEM II/B-M (V-LL) 32,5 N type portland composite cement as construction binder is suitable for the following applications:**

- monolithic reinforced concrete structures for structural and underground engineering
- "heavy" concreting, large cross section concrete, reinforced concrete structures
- load bearing concrete and reinforced concrete structures of private houses
- estrich concretes, plasters, mortars

### Composition, cement components:

Portland cement clinker, additive content according to standard composition between 21-35%, the required amount of setting control material (gypsum, REA gypsum), chromate reducing agent

### Key features, areas of application:

The CEM II/B-M (V-LL) 32,5 N type portland composite cement contains fly ash and limestone additives. The fly ash provides the favourable post-hardening of cement and the limestone ensures better particle size distribution and more efficient water retention. Due to its standard early and ultimate strength and moderate heat evolution, it is a widely used cement.

Its colour is dark grey, darker than the colour of portland cements.

Its use is beneficial in the production of concrete and reinforced concrete structures with strength classes C 8/10 to C 40/50, and due to its moderate heat evolution, it is recommended for use in summer heat with high-mass concrete structures.

Suitable for the production of frost-resistant concrete (XF1, XF3), abrasion resistant concrete (XK1), watertight concrete (XV1 – XV3), and radiation shielding concrete.

### Suggested use for the production of concrete mix and the construction of concrete structures:

The use of cement requires basic construction knowledge. If you do not have sufficient professional knowledge, consult a concrete technologist.

Basic criteria for the production of durable concrete:

- low water content
- as high density as possible
- meticulous aftercare

When creating the concrete mix, the amount of added mixing water should be as little as possible. To improve the workability of the concrete, it is recommended to add plasticizer additives. In order to achieve higher strength and a more favourable concrete structure, care must be taken to ensure that the fresh concrete is properly compacted. Aftercare of the concrete must be started immediately after placing, by spraying and flooding it with water, covering it with plastic, keeping it in the formwork, and applying a vapour barrier coating. It is advised to keep the concrete moist for 7-21 days without interruption, depending on the composition of the concrete mix, the type of concrete structure and the ambient temperature. In the event of low ambient temperatures, the frost protection and thermal insulation of the concrete structure must be ensured until the critical strength required for the concrete's resistance to freezing is reached. Recommended placing temperature: above +5°C daily average temperature.

Technical characteristics: /DDC, Labor-MEO/

	Standard requirement	Average value Beremend Plant
Compressive strength (MPa)		
■ at 7 days	≥16	26,9
■ at 28 days	≥32,5 ≤52,5	42,6
Setting time (min)		
■ beginning	≥75	219
■ end	-	303
Specific surface area (cm <sup>2</sup> /g)	-	4570
Water demand (%)	-	30,8